Bridging Prenatal and Pediatric Care: A Proposed Simple Yet Novel Approach to Preventing Family Violence

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Nearly 4% of children in the US experience physical abuse by a caregiver and 21% witness family violence at least once in their lifetime.[1] The American Academy of Pediatrics (AAP) recommends an indirect approach to identifying risk factors for child abuse: pediatricians should obtain a thorough social history and learn the family's struggles and strengths, offer anticipatory guidance on the stressors involved with raising a child, and be alert to signs and symptoms of maltreatment and intimate partner violence (IPV). Suspicion of current abuse should be reported immediately to the appropriate child protection agency. Prenatal care teams are similarly recommended to prevent and identify IPV. In the current *Guidelines for Perinatal Care*, both the American College of Obstetrics and Gynecology and the AAP recommend screening pregnant women for experiences of or risk factors for domestic violence at the first prenatal visit, at least once per trimester, and at the postpartum checkup.

The US Preventative Services Task Force reported that there is sufficient evidence to support screening pregnant women (the specific recommendation states "women of childbearing age" which by definition includes pregnant women) for IPV but insufficient evidence to determine the benefits of primary care interventions to prevent child maltreatment.[2] Additionally, interventions addressing child maltreatment have been found to be ineffective when domestic violence—primarily IPV against mothers—is present.[3] Finally, there are currently no recommendations for sharing the information gathered by either the prenatal and pediatric care teams to improve care for the mother-baby pair. Thus, innovative primary care-based strategies addressing both child maltreatment and IPV (collectively referred to as family violence hereafter) are in critical need.

Instead of championing a single screening tool or intervention to be used in pediatric care, we propose shifting our conceptualization of family violence prevention as separate, inconsistent, and often disconnected, efforts from prenatal and pediatric care teams to a formally, coordinated effort between prenatal and early pediatric care. In theory, family medicine physicians are already effective at this coordinated care and, as a result, *may* see lower rates of family violence. We argue, however, that mother-baby-centered care should also exist within the highly used fields of prenatal and pediatric care.

AAP	American Academy of Pediatrics
IPV	Intimate partner violence

Importance of Addressing Family Violence during Prenatal and Pediatric Care

First, no period of the lifespan has more opportunities for clinic-based intervention than prenatal and early pediatric care. Guidelines for prenatal care recommend at least 15 visits during the typical 9-month prenatal period and guidelines for pediatric care recommend at least 6 well-child visits during the first 12 months. Recent data estimate 74% of all women receive prenatal care during the first trimester and 99% of infants receive at least 1 preventive care visit (average is nearly 5 visits) with a pediatric care provider within the first year.[4,5]

Second, rapid in utero and early postbirth neural growth place the brain at heightened sensitivity to environmental input, including toxic stress—prolonged stress without the presence of a positive buffer—associated with family violence. Unfortunately, women are at higher risk for experiencing IPV and dying from IPV while pregnant than at any other time in their lives.[6-10] Furthermore, infants younger than 12 months have the highest rate of maltreatment as well as the highest rate of fatalities from maltreatment.[11] The co-occurrence of both heightened vulnerability and prevalence of violence confirms the need to address risk through *both* prenatal and pediatric systems of care.

Third, family violence is intergenerational.[12] Children who experience family violence are more likely to be revictimized in adulthood and to engage in family violence as parents. In addition, girls who experience family violence are more likely to have unplanned and adolescent pregnancies, both of which place her and her child at increased risk for family violence.[13-15]

Finally, family violence is expensive. The economic burden of family violence includes short- and long-term health care costs, productivity losses, child welfare and criminal justice systems expenditures, and special education services.[16,17] Estimates of cost for IPV exceed $5.8 billion USD per year.[16] Estimates of cost for victims of child maltreatment are near $124 billion USD per year.[18] Nobel Laureate James Heckman

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has demonstrated the economic benefits of implementing prevention strategies as early in development as possible.[19] Although his economic modeling begins at birth, one could argue that prevention efforts during the prenatal period could demonstrate even greater economic impact.

How to Implement Mother-Baby-Centered Care

A 2-generation model of pediatric care has already been proposed in which the pediatrician addresses both the mother and the infant's needs for the benefit of the dyad, such as postpartum depression, IPV, plans for having more children, and access to contraception.[20]

We propose using a 3-tiered model of prevention and intervention that begins with surveillance, followed by screening, followed by evidence-based intervention.[21,22] Surveillance is a universal assessment; it should occur at every visit for all patients, is not standardized, and can be adjusted based on the needs of the visit and resources of the care provider and can both proceed and follow screening. Information obtained during a medical history, for example, is considered surveillance. Most patients present with few or no risk factors during surveillance. Some patients demonstrate increased risk from surveillance, screening is conducted using standardized and—if available—validated measurement tools.[23] Screening results reveal either no risk and no further steps warranted, some risk and continued observation warranted, or definite risk and implementation of an evidence-based intervention warranted. Finally, few patients will endorse many risk factors and should be provided intensive, evidence-based intervention.

We propose that screening for risk of family violence should begin at the first prenatal visit. It is imperative that the clinician establish a safe space for discussion. Early conversations should include questions about feeling safe at home as well as history of violence or coercion from a partner. This discussion should also include an explicit conversation about present risks and the possibility for risks of IPV to emerge during pregnancy.

Surveillance could then occur at every subsequent visit, followed by screening when risk is indicated. This strategy allows the obstetrician to establish a baseline to which future visits can be compared. During routine obstetrical history taking, the following risk factors for family violence should be noted, considered, and discussed with the patient: unplanned pregnancy, maternal mental illness, caregiver substance use, parental unemployment, financial dependence on a partner, mother with less than a high school diploma, history of domestic violence, parent history of maltreatment as a child, maternal smoking, 2 or more children in the home, unmarried mother, 18 or fewer months between pregnancies, age <20, and low perceived power.[24-31] Other risk factors can and should be ascertained at birth, including low birth weight or high medical risk, inadequate prenatal care, no father identified on the birth certificate or present in child's life, and low income.[26-31] Consistent with models of cumulative risk, practitioners should consider that the greater number of factors present, the greater the vulnerability for maltreatment.[26,32] Some validated tools measuring these factors are already in existence (eg, Prenatal Risk Overview, Healthy Start Prenatal Risk Screen, and Universal Prenatal Screening Tool).[33-35]

Given the association between maternal history, prenatal characteristics, and infant well-being, better coordination between prenatal and pediatric systems of care is badly needed. For example, although it is well-documented that prenatal experiences affect child outcomes, and some of these prenatal experiences are routinely documented in the maternal health record, this documentation is not regularly shared with the pediatrician. Thus, to identify risk for family violence, a pediatrician must repeat screening that may have already been done during the prenatal period, resulting in a suboptimal standard of care. Importantly, patients will only report family violence risk factors based on rapport established with providers, and this may take several visits with the pediatrician before this is created. Further, several studies have found that, although there is general consensus for screening for nearly all types of family violence, many pediatricians do not conduct screening and feel poorly equipped to do so.[36]

One solution is to link maternal and child health records so that pediatric health records include the risk factors already identified from maternal health records, similar to the standard practice for maternal infections known to affect infants. This linkage could be as elaborate as which risk factors are present or more limited, like a risk score without the specific factors as has been used successfully in pediatric practice.[37] The latter option limits the information about the mother shared in the child's record, but still provides valuable information to be used by pediatric care providers. Because some risk and resilience factors are transient, this information should be updated regularly. Extending this idea 1 step further, formal sharing of information between home visiting or service providers (eg, child welfare, shelters) and physicians has the potential to even further enhance the continuity of care.

We acknowledge that this solution—sharing maternal health information with her child's a pediatric care provider—presents several ethical and logistical concerns that might decrease the likelihood of successful implementation. We outline some of these potential ethical concerns based on 5 core principles of ethics (ie, autonomy and informed consent, beneficence, nonmaleficence, truthfulness and confidentiality, and justice).

Autonomy and Informed Consent

Care systems must decide if patients have autonomy in deciding if their records are linked. That is, will patients need to provide formal consent for this linkage and if so, when? In addition, will only mothers make this decision or will fathers provide consent as well?

Beneficence and Nonmaleficence

A shared medical record should only be implemented if it will promote the well-being of patients and not cause harm. The

balance of beneficence and nonmaleficence may change as the child ages. For example, it may be beneficial to link records in early childhood, but maleficent to keep records linked in adolescence.

Truthfulness and Confidentiality

Consistent with traditional medical records, care systems will need to ensure the confidentiality of linked medical records. It is possible that ensuring this confidentiality will require more than ensuring confidentiality of a traditional medical record. Relatedly, care systems will need to decide who will have access to each or both charts—mother, father, all treating physicians for both mother and infant? For example, if a mother visits a dermatologist, would that physician have access to her infant's record? Finally, should complete records be shared, or just select information?

Justice

Linked records may impact patients differently based on demographic or social characteristics. For example, if a biological mother no longer has custody of her child, either temporarily or permanently, do the records become unlinked? If so, how will providers be notified of a change in custody? If the child is adopted or in custody of another caregiver, would it be beneficial to link the new caregiver's medical record?

Regarding logistics, several issues will need to be addressed. First, if a standardized mother-baby template is to be used in electronic medical records, will this template be unique to each electronic health record system or will there be a universal, independent product that can interface with all electronic health records? The development of such a template would need significant collaboration between the American College of Obstetricians and Gynecologists, AAP, and biomedical informaticians. Second, how will sharing occur between independent health systems? Currently, most external records are copied or scanned into medical records, but not well-integrated into the receiving system's templates. Creating a system that requires clinicians to comb through additional scanned documents is unlikely to be successful. For many private practices—particularly in rural and underserved areas—electronic medical record systems are not practical and thus not used. How could sharing mother-baby health records work in these settings? Several of the ethical issues mentioned also relate to logistical issues: If mothers are asked to provide consent for such linkages, when and how will they do so? If the woman who gave birth is not the caregiver for the infant, how will information technologists be notified that an "unlink" is needed? What systems will need to be in place to ensure only the appropriate individuals have access to the necessary information?

As with any advance in medicine, each of these concerns will need to be carefully considered before universal implementation. However, given the potential benefit, we suggest it as 1 possible intervention strategy that may improve continuity of care for the mother-child dyad and improve the health and well-being for both. In addition, it is possible that some systems of care (eg, family medicine practices) have already tackled many of these issues. To the extent this is the case, sharing successful solutions would save significant time and resources.

Another solution is to initiate screening by a pediatric provider during the *prenatal* period. Both the AAP and the American College of Obstetricians and Gynecologist recommend that parents identify and meet with their baby's pediatric care provider during the prenatal period, generally after 25 weeks of gestation. This visit provides an early opportunity for the pediatric care provider to conduct screening for family violence risk factors and begin developing rapport with the family.

Finally, the highest risk mother-baby pairs—as identified through the tiered approach described earlier—could benefit from a care team model, similar to those used in other types of complex care (eg, oncology).[38] With these models, all parties with a vested interest in supporting the mother and her child meet regularly to discuss dyad health, progress toward goals of safety, and ongoing needs. These multidisciplinary teams should include not only clinicians, but also professionals from social work, violence shelters, legal aid, child welfare, and law enforcement. Case managers are often the critical link for maintaining up-to-date records and providing consistency for a patient dyad. A team model that does not separate care for the mother-baby pair would be most effective in promoting the health and safety of the dyad.

Conclusions

The current health systems for maternal care and pediatric care are disjointed. Breaking the medical silos to offer coordinated prenatal and pediatric care offer a unique opportunity to prevent this disease in a new mother-infant dyad. In addition, it is important to acknowledge that identifying and addressing family violence in clinical care alone is not sufficient and that strong collaborations with nonhealthcare systems are key. As prenatal and pediatric care providers move toward formalized, coordinated care to address family violence, these providers will also need to advocate for the development of nonhealthcare systems (eg, legal support for adult victims, preventive programs in law enforcement) to support families outside of the clinical setting. Finally, as models of prenatal and pediatric healthcare evolve to address the complex needs of families, healthcare funding that prioritizes preventive care (eg, by considering coordinated care a quality metric) must evolve as well. ■

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